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# Electrical & Electronics Abstracts

Science Abstracts Series B  
July - December 1998

Subject Index (A-L)

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# SIX-MONTHLY INDEXES TO ELECTRICAL & ELECTRONICS ABSTRACTS

Twice a year as part of their subscription to Electrical & Electronics Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts – a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences and book titles. The List of Journals abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue. Cumulative indexes for earlier years are also available: for details please see the inside back cover.

## Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles under it. The majority of the subject headings fall into the following categories: property, phenomenon, substance or named objects, instrument, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal, e.g. 12345 refers to abstract number 12345 for the period covered by the Index.

The language of the article, if it is not in English, is also indicated, e.g. quadratic stabilization by fuzzy control (*Japanese*) 19453.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored (e.g.  $\alpha$ -brass, 5-sulphosalicylic, 31 Gyni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe-list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

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# Abbreviations and Acronyms

## Electrical & Electronics Abstracts

Science Abstracts Series B

July – December 1998

## Subject Index (A-L)

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Abbreviations and Acronyms

Subject Index

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# Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron, aluminium and gallium garnets appear in the formula lists as MIG, MAG and MGG (where M is metal element, e.g. YIG and YAG); (Pb,La)(Zr,Ti)O<sub>3</sub> and Pb(Zr,Ti)O<sub>3</sub> appear as PLZT and PZT; ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>-AlF<sub>3</sub>-NaF and ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>-AlF<sub>3</sub>-NaF-PbF<sub>2</sub> appear as ZBLAN and ZBLANP. **Organic substances** including **liquid crystals** and **polymers** are not given as formulae but common abbreviations are used.

1D	one-dimensional	ALGOL	Algorithmic Language
2D	two-dimensional	ALS	Advanced Light Source
2DEG	2D electron gas	ALU	arithmetic logic unit
3D	three-dimensional	ALV	autonomous land vehicle
4GL	fourth generation language	ALWR	advanced light water reactor
A/D	analogue-to-digital	AM	air mass number or amplitude modulation
AAL	ATM adaptation layer	AM/FM	automated mapping/facilities management
AAS	atomic absorption spectrometry(-oscopy)	AMLCD	active matrix liquid crystal display
ABC	aerial bundled cables/conductors or absorbing boundary condition	AMPS	Advanced Mobile Phone System
ABR	available bit rate	AMPTE	Active Magnetospheric Particle Tracer Explorers
ABS	acrylonitrile-butadiene-styrene	AMR	automatic meter reading
AC	alternating current	AMS	accelerator mass spectroscopy
ACD	automatic call distribution	AMTEC	alkali metal thermoelectric convertor
ACEL	AC electroluminescent	ANA	automatic network analyser
ACI	adjacent channel interference	ANN	artificial neural network
ACRT	accelerated crucible rotation technique	ANOVA	analysis of variance
ACSR	aluminium conductor steel reinforced	ANS	Advanced Neutron Source
ACT	acoustic charge transport	ANSI	American National Standards Institute
ACTS	Advanced Communication Technology Satellite or advanced communication technology and services	AOI	automatic optical inspection
ACTV	advanced compatible television	APACHE	Accelerator for Physics and Chemistry of Heavy Elements
ACV	air cushion vehicle	APC	adaptive predictive coding
ADC	analogue-to-digital conversion	APCM	adaptive PCM
ADM	adaptive delta modulation	APCVD	atmospheric pressure CVD
ADP	administrative data processing	APD	avalanche photodiode
ADPCM	adaptive differential PCM	APFIM	atom probe field ion microscopy
ADS	automatic depressurisation system	API	application programming interface
ADSL	asymmetric digital subscriber line	APK	amplitude phase keying
ADTV	advanced definition television	APL	A Programming Language
AE	acoustic emission	APS	Advanced Photon Source or appearance potential spectra (-oscopy)
AEA	American Electronics Association	APW	augmented plane wave
AES	Auger electron spectra (-oscopy)	APWR	advanced pressurised water reactor
AF	audio-frequency	ARC	antireflection coating
AFBC	atmospheric fluidised bed combustion	ARET	accelerated reliability enhancement testing
AFC	automatic frequency control	ARINC	Aeronautical Radio Inc.
AFL	abstract family of languages	ARMA	autoregressive moving average
AFM	atomic force microscopy	ARMAX	ARMA exogenous
AFMR	antiferromagnetic resonance	ARPA	Advanced Research Projects Agency
AFR	away from reactor (spent fuel storage)	ARPES	angle resolved photoemission spectra (-oscopy)
AGB	asymptotic giant branch	ARQ	automatic repeat request
AGC	automatic gain control	ARROW	antiresonant reflecting optical waveguide
AGN	active galactic nucleus (nuclei)	ART	adaptive resonance theory
AGR	advanced gas-cooled reactor	ARUPS	angular resolved UPS
AGS	alternating gradient synchrotron	ASCII	American Standard Code for Information Interchange
AGV	automatic guided vehicle	ASD	adjustable speed drives
AHDL	analogue HDL	ASE	amplified spontaneous emission
AHP	analytic hierarchy process	ASIC	application-specific integrated circuit
AI	artificial intelligence	ASIP	application-specific integrated processor
AIC	adaptive interference canceller	ASK	amplitude shift keying
AIN	advanced intelligent networks	ASPSK	antipodal Stokes parameters shift keying
ALARA	as low as reasonably achievable	ASQC	American Society of Quality Control
ALE	atomic layer epitaxy or adaptive line enhancer		



ASSP	application-specific standard product	BIST	built-in self-test
AT&T	American Telephone & Telegraph	BIT	built-in test
ATC	air traffic control	BITE	built-in test equipment
ATCS	Advanced Train Control System	BJT	bipolar junction transistor
ATE	automatic test equipment	BLDCM	brushless DC motor
ATF	Advanced Toroidal Facility	BNFL	British Nuclear Fuels plc
ATG	automatic test generation	BOC	Bell Operating Company
ATLAS	abbreviated test language for avionic systems	BOD	bistable optical device
ATM	asynchronous transfer mode or automatic teller machine or Axilrod-Teller-Moto	BOX	buried oxide
ATMS	assumption-based truth maintenance system	BP	backpropagation or British Petroleum
ATPG	automatic test pattern generation	BPM	beam propagation method
ATR	attenuated total reflection or automatic target recognition	BPR	business process reengineering
ATS	automatic test system	BPSG	borophosphosilicate glass
ATV	advanced television	BPSK	binary phase shift keying
ATW	accelerator transmutation of (radioactive) waste	BPX	burning plasma experiment
ATWS	anticipated transients without scram	BRDF	binomial reflectivity distribution function
AUV	autonomous underwater vehicle	BRET	breeder reprocessing engineering test
AVC	automatic volume control	BSDL	Boundary Scan Description Language
AVHRR	advanced very high-resolution radiometer	BSG	borosilicate glass
AWGN	additive white Gaussian noise	BSI	British Standards Institution
B-ISDN	broadband ISDN	BT	British Telecom
BAER	brainstem auditory evoked response	BTB	Basic Technology Accelerator
BARITT	barrier injection transit time	BTSC	Broadcast Television Systems Committee
BASIC	Beginners' All-purpose Symbolic Instruction Code	BVP	boundary value problem
BAW	bulk acoustic wave	BWG	beam waveguide
BBC	British Broadcasting Corporation	BWIP	Basalt Waste Isolation Project
BBB	bucket-brigade device	BWO	backward wave oscillator
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon	BWR	boiling water reactor
BCC	body centred cubic	BWT	backward wave tube
BCD	binary-coded decimal	C-V	capacitance-voltage
BCDMOS	bipolar-CMOS-DMOS	C/N	carrier-to-noise
BCH	Bose-Chadhuri-Hocquenghem	C <sup>2</sup>	command and control
BCS	Bardeen-Cooper-Schrieffer	C <sup>3</sup>	commandmand, control and communications
BCT	body centred tetragonal	C <sup>3</sup> I	commandmand, control, communications and intelligence
BDD	binary decision diagram	C <sup>3</sup> L	complementary constant current logic
BEBC	Big European Bubble Chamber	C <sup>4</sup>	command, control, communications and computers
BEDT-TTF	bis(ethylenedithio)-tetrathiafulvalene (-inium)	C4	controlled collapse chip connection
BEEM	ballistic electron emission microscopy	C <sup>4</sup> I	command, control, communications, computers and intelligence
BEM	boundary element method	CAA	computer-aided analysis
BEPC	Beijing Electron Positron Collider	CAA(A)	Clean Air Act (amendments)
BER	bit error rate	CAAD	computer-aided architectural design
BERT	bit error rate tester	CAD	computer-aided design
BESOI	bond-and-etchback silicon on insulator	CADAT	computer-aided design and testing
BFL	buffered FET logic	CADD	computer-aided draughting and design
BFN	beam-forming network	CAE	computer-aided engineering
BFO	beat-frequency oscillator	CAES	compressed air energy storage
BGA	ball grid array	CAGD	computer-aided geometric design
BGO	bismuth germanate	CAI	common air interface or computer-assisted instruction
BH	buried heterostructure	CAIBE	chemically assisted ion beam etching
BIBO	bounded input, bounded output	CAL	computer-aided learning
BiCMOS	bipolar CMOS	CALL	computer-assisted language learning
BiFET	bipolar FET	CAM	computer-aided manufacturing or content addressable memory
BIL	buried injection logic	CAMAC	computer automated measurement and control
BILBO	built-in logic block observation	CAN	controller area network(ing)
BiMOS	bipolar metal-oxide-semiconductor	CANDU	Canadian deuterium uranium
BIOS	basic input/output system	CAPP	computer-aided process (production) planning
BIS	bremsstrahlung isochromat spectroscopy	CAQ	computer-aided quality assurance
BISDN	broadband ISDN	CAR	computer-aided retrieval
BISR	built-in self-repair		



CARM	cyclotron autoresonance maser	CERN	European Council for Nuclear Research
CARS	coherent anti-Stokes Raman scattering (spectra)	CESAR	CERN Electron Storage and Accumulation Ring
CART	classification and regression trees	CESR	conduction electron spin resonance
CASE	computer-aided software engineering	CETI	contact with extraterrestrial intelligence
CASS	consolidated automated support system	CFA	continued fraction approximation
CAT	computer-assisted tomography or computerised axial tomography	CFAR	constant false alarm rate
CATR	compact antenna test range	CFBC	circulating fluidised bed combustion
CATT	controlled avalanche transit transistor	CFC	chlorofluorocarbon
CATV	cable TV or community antenna TV	CFD	computational fluid dynamics
CAV	constant angular velocity	CFG	context free grammar
CB	citizens band	CFIE	combined field integral equation
CBE	chemical beam epitaxy	CFL	context free language
CBED	convergent beam electron diffraction	CFSK	coherent frequency shift keying
CBI	computer-based instruction	CFT	conformal field theory
CBL	computer-based learning	CGA	Computer Graphics Adaptor
CBOOA	cyanobenzylidene octyloxylaniline	CGH	computer-generated holography (-gram)
CBR	case-based reasoning or constant bit rate	CGI	common gateway interface
CBT	computer-based training	CGTO	contracted Gaussian-type orbital
CC	coupled channels or calculus of constructions	CHF	coupled Hartree-Fock
CCBA	coupled channel Born approximation	CHILL	CCITT High-Level Language
CCCS	current-controlled current source	CHINT	charge injection transistor
CCD	charge-coupled device	CHO	Chinese hamster ovary
CCFL	counter current flow limiting (LOCA phenomenon)	CHP	combined heat and power
CCII	co-channel interference	CI	configuration interaction
CCII	second generation current conveyor	CID	charge injection device
CCIR	International Radio Consultative Committee	CIDEP	chemically induced dynamical electron polarisation
CCITT	International Telephone & Telegraph Consultative Committee	CIDNP	chemically induced dynamical nuclear polarisation
CCL	capacitor coupled logic	CIIL	Common Instrument Interface Language
CCN	cloud condensation nucleus/nuclei	CIIL	Control Intermediate Interface Language
CCS	common channel signalling or calculus of communicating systems	CIM	computer integrated manufacture (-ing) or constituent interchange model
CCTF	Cylindrical Core Test Facility	CIRC	cross-interleaved Reed-Solomon code
CCTR	Culham Conceptual Tokamak Reactor	CISC	complex instruction set computer
CCTV	closed circuit TV	CIT	Compact Ignition Tokamak
CCVS	current-controlled voltage source	CL	cathodoluminescence
CD	compact disc or critical dimension	CLAN	cordless LAN
CD-I	compact disc - interactive	CLC	cholesteric liquid crystal
CD-ROM	compact disc ROM	CLCC	ceramic leaded chip carrier
CD-RW	compact disc-rewritable	CLOS	command-to-line-of-sight
CD-V	compact disc - video	CLP	constraint logic programming
CDD	concurrent decision diagram	CLV	constant linear velocity
CDFR	Commercial Demonstration Fast Reactor	CMA	constant modulus algorithm
CDI	collector diffusion isolation	CMAC	cerebellar model arithmetic computer
CDLC	cellular data link control	CMAC	cerebellar model articulation controller
CDM	code division multiplexing or charged device model or cold dark matter	CMB	core-mantle boundary
CDMA	code division multiple access	CMD	colour-magnitude diagram(s)
CDP	common depth point	CME	coronal mass ejection(s)
CDW	charge-density wave	CMI	computer managed instruction
CEBAF	Continuous Electron Beam Accelerator Facility	CMIP	Common Management Information Protocol
CECL	cascade-emitter coupled logic	CML	current-mode logic
CELP	code excited linear prediction	CMM	coordinate measuring machine or Capability Maturity Model
CEM	channel electron multiplier	CMOS	complementary metal-oxide-semiconductor
CEMS	conversion electron Mossbauer spectra (-oscopy)	CMP	chemical mechanical polishing (planarisation)
CEPA	coupled electron pair approximation	CMR	common-mode rejection
CEPT	Conference of European Postal and Telecommunications	CMRR	common-mode rejection ratio
CERDIP	ceramic dual-in-line package	CMS	cable management system
		CMV	common-mode voltage
		CMVR	common-mode voltage ratio
		CNC	computerised numerical control



CNDO	complete neglect of differential overlap	CT1/2/3	cordless telephony (of 1st, 2nd, 3rd generation)
CNF	conjunctive normal form	CTD	charge transfer device
CNN	cellular neural net(work)	CTE	coefficient of thermal expansion
CNR	carrier-to-noise ratio	CTI	computer telephony integration
CNS	central nervous system	CTL	complementary-transistor logic
CO	central office	CTR	controlled thermonuclear reactor
COB	chip-on-board	CUT	circuit under test
COBOL	Common Business Oriented Language	CV	cataclysmic variable(s)
COCOMO	cost complexity model(ling)	CVD	chemical vapour deposition
COD	crack opening displacement	CVI	chemical vapour infiltration
COFDM	coded orthogonal FDM	CVSDM	continuously-variable slope delta modulation
COG	chip-on-glass	CVT	chemical vapour transport
COM	computer output to microform (fiche or film) or coupling of modes or Component Object Model	CW	continuous wave
COMFET	conductivity-modulated FET	CZ	Czochralski
CORBA	Common Object Request Broker Architecture	D/A	digital-to-analogue
CORDIC	coordinate rotation digital computer	DAB	digital audio broadcasting
COTS	commercial off-the-shelf	DAC	digital-to-analogue conversion
COVA	computer code validation	DACS	digital access and cross-connect system
CP	charge, parity	DAD	digital audio disc
CP-MAS	cross-polarisation MAS	DAG	directed acyclic graph
CPA	coherent potential approximation or critical path analysis	DAI	distributed artificial intelligence
CPC	compound parabolic concentrator	DAMA	demand assigned multiple access
CPE	customer premises equipment	DAQ	data acquisition
CPFSK	continuous phase FSK	DARMA	deterministic autoregressive moving average
CPM	continuous phase modulation or critical path method	DARPA	Defense Advanced Research Projects Agency
CPN	coloured Petri net or customer premises network	DASD	direct access storage device
CPS	coplanar strip(line)	DAT	digital audio tape
CPSK	coherent phase shift keying	DATA	digital autonomous terminal access communication
CPT	charge, parity, time	DAW	dry active waste
CPU	central processing unit	DBMS	database management system
CPV	common pressure vessel	DBPSK	differential-binary phase-shift keying
CPW	coplanar waveguide	DBR	distributed Bragg reflector
CQPSK	coherent quadrature PSK	DBS	direct broadcasting by satellite
CRBR	Clinch River Breeder Reactor Project	DC	direct current
CRC	cyclic redundancy check	DC-PBH	double-channel PBH
CRCW	concurrent read, concurrent write	DCA	direct chip attach
CRDA	control rod drop accident	DCA	dynamic channel allocation
CREW	concurrent read, exclusive write	DCE	distributed computing environment
CRMA	cyclic reservation multiple access	DCEL	direct current electroluminescent
CRNL	Chalk River Nuclear Laboratories	DCFL	direct-coupled FET logic
CRO	cathode ray oscilloscope	DCG	dichromated gelatin
CRSR	coherent resonant Stokes rotation	DCLC	drift cyclotron loss cone (instability)
CRT	cathode ray tube	DCOM	Distributed Component Object Model
CS	coupled states	DCS	digital cross-connect system or digital cellular service (system) or distributed control system
CSCW	computer supported cooperative work	DCT	discrete cosine transform
CSI	current source inverter	DCTL	direct-coupled transistor logic
CSM	continuous slowing down models	DCVS	differential cascode voltage switch
CSMA	carrier sense multiple access	DDC	direct digital control
CSMA/CD	CSMA with collision detection	DDE	dynamic data exchange
CSP	channel substrate planar or communicating sequential processes or constraint satisfaction problem or chip-scale packaging	DDL	diode-diode logic
CSRS	coherent Stokes-Raman spectra (-oscopy)	DDS	direct digital synthesis
CSS	contact start/stop	DE	differential equation
CSSB/AM	companded single-sideband AM	DECENT	distribution of exact classical energy transfer
CSTR	continuous stirred tank reactor	DECT	digital European cordless telephone (telecommunication)
CT	computerised tomography or current transformer	DEDS	discrete event dynamic system
		DEFT	density functional theory
		DEM	digital elevation model(s)



DEMUX	demultiplexer(-ing)	DPCM	differential PCM
DENOX	nitrogen oxides removal	DPDA	deterministic pushdown automaton
DES	data encryption standard	DPLL	digital phase locked loop
DESIRE	diffusion enhanced silylating resist	DPOAE	distortion product otoacoustic emission
DESY	Deutsches Electron Synchrotron	DPPC	dipalmitoyl phosphatidyl chloride
DEVS	discrete event system specification	DPPH	diphenylpicrylhydrazyl
DF	Dirac-Fock	DPS	distributed parameter system
DFB	distributed feedback	DPSK	differential phase shift keying
DFE	decision feedback equaliser or design for environment	DQDB	distributed queue dual bus
DFG	difference frequency generation	DQPSK	differential quadrature PSK
DFM	design for manufacture(-ability)	DRAM	dynamic RAM
DFT	discrete Fourier transform or design for testability	DRO	dielectric resonator oscillator
DFWM	degenerate four-wave mixing	DS-SS	direct sequence spread spectrum
DGPS	differential GPS	DS-SSMA	direct sequence SSMA
DH	double heterostructure	DSA	digital subtraction angiography
DHBT	double heterojunction bipolar transistor	DSAM	Doppler shift attenuation method
DHF	Dirac-Hartree-Fock	DSB	double sideband
DHT	discrete Hartley transform	DSC	differential scanning calorimetry
DIAL	differential-absorption lidar	DSF	dispersion shifted fibre
DIBL	drain induced barrier lowering	DSI	digital speech interpolation
DIC	digital integrated circuit	DSL	digital subscriber line
DIET	desorption induced by electronic transitions	DSM	demand side management
DIL	dual-in-line	DSO	digital storage oscilloscope
DIP	dual in-line package	DSP	digital signal processor (-ing)
DIS	deep inelastic scattering or distributed interactive simulation	DSS	decision support system or digital subscriber signalling
DITE	Divertor in Torus Experiment	DTA	differential thermal analysis
DLA	diffusion limited aggregation	DTL	diode transistor logic
DLC	diamond-like carbon	DTMF	dual tone multi-frequency
DLL	dynamic link library	DTP	desktop publishing
DLMS	delayed least mean squares	DTPP	Demonstration Tokamak Power Plant
DLTS	deep level transient spectra (-oscopy)	DTU	dual topological unitarisation
DM	delta modulation	DUT	device under test
DMA	direct memory access	DUV	deep ultraviolet
DMC	dynamic matrix control	DV-X $\alpha$	discrete variational X $\alpha$
DMD	digital micromirror	DVD	digital versatile disc
DMM	digital multimeter	DVD	digital video disc
DMOS	double-diffused metal-oxide-semiconductor	DVI	digital video interactive
DMSK	differential minimum shift keying	DVM	digital voltmeter
DMSO	dimethylsulphoxide	DWBA	distorted wave Born approximation
DMU	decision-making unit	DWDM	dense WDM (multiple access)
DNA	deoxyribonucleic acid or Digital Network Architecture	DWIA	distorted wave impulse approximation
DNF	disjunctive normal form	DWPF	Defence Waste Processing Facility
DNMR	double nuclear magnetic resonance	E/D	enhancement-/depletion-mode
DNS	domain name system	E1	electric dipole
DNTS	digital data exchange network testing system	E2	electric quadrupole
DOA	direction of arrival	E2PROM	electrically erasable PROM
DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate	EAROM	electrically alterable ROM
DoD	Department of Defense (USA)	EAS	extensive air shower
DOE	Department of Energy (USA) or design of experiments or diffractive optical element	EAX	electronic automatic exchange
DOF	degree(s) of freedom	EB	exponential Born
DOPSK	differential offset phase shift keying	EBBA	4-ethoxybenzylidene-4n-butylaniline
DORIS	Doppel-Ring-Speicher	EBIC	electron beam induced current(s)
DOS	disc operating system or density of states	EBIS	electron beam ion source
DOVETT	double velocity transit time	EBIT	electron beam ion trap
DOX	design of experiments	EBL	explanation-based learning
DP	data processing	EBR	experimental breeder reactor
		EBT	Elmo Bumpy Torus
		EBU	European Broadcasting Union
		ECA	event-condition-action
		ECALE	electrochemical atomic layer epitaxy
		ECC	emergency core cooling or error correction code
		ECCM	electronic counter-counter measures
		ECCS	emergency core cooling system



ECELR	Epithermal Critical Experiment Laboratory Reactor	ENEL	Ente Nazionale per l'Energia Elettrica (Italian National Electric Energy Agency)
ECG	electrocardiography (-gram)	ENG	electronic news gathering
ECL	emitter coupled logic	ENSO	El Nino - Southern Oscillation
ECM	electronic countermeasures	EOF	end-of-file
ECMWF	European Centre for Medium Range Weather Forecasts	EOG	electrooculography (-gram)
ECoG	electrocortigraphy (-gram)	EOQ	economic order quantity
ECR	electron cyclotron resonance	EOS	electrical overstress
ECRH	electron cyclotron resonance heating	EPA	Environmental Protection Agency (USA)
EDA	ethylene diamine or electronic design automation	EPDM	ethylene propylene diene monomer
EDAX	energy-dispersive X-ray analysis	EPLD	electrically programmable logic device
EDF	Electricité de France	EPMA	electron probe microanalysis
EDFA	erbium-doped fibre amplifier	EPR	Einstein-Podolsky-Rosen or electron paramagnetic resonance or ethylene propylene rubber or European Pressurised water Reactor
EDI	electronic data interchange	EPRI	Electric Power Research Institute
EDIF	electronic data interchange format	EPROM	erasable PROM
EDM	electrical discharge machining	ER	electrorheology(-ical)
EDP	electronic data processing	ER	entity-relationship
EDS	energy dispersive spectra(-oscopy)	ERBE	Earth Radiation Budget Experiment
EDTA	ethylene diamine tetra-acetic acid	ERDA	elastic recoil detection analysis
EDTV	extended definition TV	ERG	electroretinography (-gram)
EDW	electron density wave	ERP	effective radiated power
EDX	energy-dispersive X-ray	ES	expert system
EEG	electroencephalography (-gram)	ESA	European Space Agency
EELFS	electron energy loss fine structure	ESCA	electron spectroscopy for chemical analysis
EELS	electron energy loss spectra (-oscopy)	ESCAR	Experimental Superconducting Accelerating Ring
EEPLD	electrically erasable PLD	ESD	electron stimulated desorption or electrostatic discharge
EEPROM	electrically erasable PROM	ESDIAD	electron stimulated desorption ion angular distributions
EFG	edge-defined film fed growth	ESF	engineering safety features
EFIE	electric field integral equation	ESM	electronic support measures
EFL	emitter-follower logic or emitter function logic	ESOC	European Space Operations Centre
EFM	extended Flygare method	ESP	electrostatic precipitators
EFT	electronic funds transfer	ESPI	electronic speckle pattern interferometry
EGA	Enhanced Graphics Adaptor	ESPRIT	estimation of signal parameters by rotational invariance techniques or European Strategic Programme for Research in Information Technology
EGG	electrogastrography (-gram)	ESR	electron spin resonance or equivalent series resistance
EHD	electrohydrodynamics	ESS	electronic switching system or environmental stress screening
EHDTV	enhanced high-definition TV	ESTELLE	Extended State Transition Language
EHF	extremely high frequency	ET	bis(ethylenedithio)-tetrathiafulvalene
EHP	electron-hole potential method	ETA-II	Engineering Test Accelerator-II
EHT	extended Huckel theory or extra high tension	ETACS	Extended Total Access Communications System
EHV	extra high voltage	ETM	engineering test model
EIA	Electronic Industries Association	ETSI	European Telecommunications Standards Institute
EIRP	equivalent isotropically radiated power	ETV	enhanced TV
EIS	electrochemical impedance spectroscopy	EU	European Union
EISA	extended Industry Standard Architecture	EUT	equipment under test
EKF	extended Kalman filter	EUV	extreme ultraviolet
EKG	electrokymography (-gram)	EV	electric vehicle
EL	electroluminescent(-ence)	EW	electronic warfare
ELDOR	electron electron double resonance	EX-OR	exclusive OR (logic)
ELF	extremely low frequency	EXAFS	extended X-ray absorption fine structure
ELO	epitaxial lateral overgrowth	F-N	Fowler-Nordheim
EM	electromagnetic or expectation maximisation	FACTS	flexible AC transmission system
EMC	electromagnetic compatibility or European Muon Collaboration		
EMF	electromotive force		
EMG	electromyography (-gram)		
EMI	electromagnetic interference		
EMP	electromagnetic pulse		
EMS	energy management system		
EMTP	electromagnetic transients program		
ENDOR	electron nuclear double resonance		



FAMOS	floating gate avalanche MOS	fMRI	functional magnetic resonance imaging
FBC	fluidised bed combustion	FMS	flexible manufacturing system <i>or</i> flight management system
FBG	fibre Bragg grating	FOG	fibre optic gyroscope
FBL	fly-by-light	FORTAN	Formula Translation (language)
FBR	fast breeder reactor	FOV	field of view
FCC	face centred cubic <i>or</i> Federal Communications Commission (USA)	FP	functional programming
FCFS	first come first served	FPA	focal plane array
FCI	fuel-cladding interaction	FPC	fusion power core
FCOB	flip chip on board	FPD	flat panel display
FCT	field-controlled thyristor	FPGA	field programmable gate array
FDD	floppy disc drive <i>or</i> frequency division duplex	FPLA	field programmable logic array
FDDI	fibre distributed data interface	FPLMTS	future public land mobile telecommunication system
FDM	frequency division multiplex(ing)	FPT	finite perturbation theory
FDMA	frequency division multiple access	FQHE	fractional quantum Hall effect
FDNC	frequency dependent negative conductance	FRAM	ferroelectric random access memory
FDNR	frequency dependent negative resistance	FRED-FET	fast recovery epitaxial diode FET
FDTD	finite difference time-domain	FRMR	field reversed mirror reactor
FDTs	fixed delay tree search	FROG	frequency resolved optical gating
FEA	finite element analysis <i>or</i> field emitter array	FSDE	fission suppressed direct enrichment (breeder blanket)
FEC	forward error correction	FSGO	floating spherical Gaussian orbitals
FECFET	floated electron channel FET	FSK	frequency-shift keying
FECL	feedback ECL	FSM	finite state machine
FED	Fusion Engineering Device (USA) <i>or</i> field emission display	FSS	fixed satellite service <i>or</i> frequency selective surface
FEDC	Fusion Engineering Device Centre (USA)	FT	Fourier transform
FEL	free electron laser	FTIR	Fourier transform infrared <i>or</i> frustrated total internal reflection
FEM	field emission microscopy <i>or</i> finite element method	FTP	File Transfer Protocol
FER	Fusion Experimental Reactor (Japan) <i>or</i> frame error rate	FTR	Fast Test Reactor
FES	functional electrical stimulation	FTTB	fibre-to-the-building
FET	field effect transistor	FTTC	fibre-to-the-curb
FFH	fast frequency hopping	FTTH	fibre-to-the-home
FFHR	fusion-fission hybrid reactor	FWHM	full width half maximum
FFT	fast Fourier transform	FWM	four wave mixing
FFTF	Fast Flux Test Facility	GA	genetic algorithm
FGD	flue gas desulphurisation	GAMBIT	gate modulated bipolar transistor
FH-SS	frequency hopped spread spectrum	GANIL	Grand Accelérateur National à Ions Lourds
FH-SSMA	frequency hopped SSMA	GASH	guanidine aluminium sulphate hexahydrate
FHNC	Fermi hypernetted chain	GCB	gas circuit breakers
FIB	focused ion beam	GCC	gasification combined cycle
FIFO	first in, first out	GCFR	gas-cooled fast breeder reactor
FIM	field ion microscopy	GCHWR	gas cooled heavy water moderated reactor
FIMOS	floating gate ionisation injection metal-oxide-semiconductor	GCM	general circulation model <i>or</i> generator coordinate method
FIPOS	full isolation by porous oxidised silicon	GCR	group code recording
FIR	far infrared <i>or</i> finite impulse response	GDR	giant dipole resonance
FISO	fast in, slow out	GDSS	group decision support system
FITL	fibre in the loop	GEO	geostationary orbit
FLC	ferroelectric liquid crystal	GETR	General Electric Test Reactor
FLCD	ferroelectric liquid crystal display	GF	Galois field
FLIR	forward looking infra-red	GFSK	Gaussian frequency shift keying
FLL	frequency locked loop	GHF-NO-CI	generalised Hartree-Fock/natural orbital/configuration interactions
FLOPS	floating point operation(s) per second	GIAO	gauge-invariant atomic orbitals
FLOTOX	floating-gate tunnel oxide	GIC	generalised immittance convertor <i>or</i> graphite intercalation compound <i>or</i> geomagnetically induced currents
FM	frequency modulation	GIDL	gate induced drain leakage
FMEA	failure mode and effects analysis	GIF	graphical image format
FMECA	failure modes effects and criticality analysis		
FMIT	Fusion Materials Irradiation Test Facility		
FMR	ferromagnetic resonance		



GIS	gas insulated system (substation or switchgear) <i>or</i> geographic information system	HEED	high-energy electron diffraction
GITL	gas insulated transmission line	HeLa	Henrietta Lacks
GKS	Graphical Kernel System	HEMP	high-altitude electromagnetic pulse
GLONASS	Global Orbiting Navigation Satellite System	HEMT	high electron mobility transistor
GMA	gas metal arc	HET	hot electron transistor
GMDH	group method of data handling	HEU	highly enriched uranium (93% U235)
GMDSS	Global Maritime Distress and Safety System	HEU/Th	highly enriched U/Th fuel
GMR	giant monopole resonance	HEXFET	hexagonal MOSFET
GMSK	Gaussian filtered MSK	HF	Hartree-Fock <i>or</i> high-frequency
GNSS	Global Navigation Satellite System	HFC	hybrid fibre coax
GO	Gaussian orbitals <i>or</i> geometrical optics	HFEF	Hot Fuel Examination Facility
GP	Guinier-Preston	HFET	heterojunction FET
GPC	generalised predictive control	HFIR	high flux isotope reactor
GPED	gas phase electron diffraction	HFIR	High Field Ignition Test Reactor
GPIB	general purpose interface bus	HFS	Hartree-Fock-Slater <i>or</i> hyperfine structure
GPM	ground potential model	HGMS	high-gradient magnetic separation
GPS	Global Positioning System	HI	heavy ion
GQR	giant quadrupole resonance	HID	high-intensity discharge
GR	general relativity	HIFET	heterointerface FET
GRIN	graded (gradient) refractive index	HIGFET	heterostructure insulated gate FET
GRINSCH	gradient index separate confinement heterostructure	HIP	hot isostatic pressing
GSM	global system for mobile communications <i>or</i> Groupe Speciale Mobile	HIPERLAN	high-performance (radio) LAN
GSMBE	gas source molecular beam epitaxy	HIPPI	high-performance parallel interface
GSPC	gas scintillation proportional chamber (counter)	HIRF	high-intensity radiated fields
GT	group technology	HIS	hospital information system
GTD	geometrical theory of diffraction	HIXE	heavy ion induced X-ray emission
GTHTGR	gas turbine HTGR	HJBT	heterojunction bipolar transistor
GTO	gate turn-off <i>or</i> Gaussian-type orbitals	HJFET	heterojunction FET
GUI	graphical user interface	HLL	high-level language
GUT	grand unified theory	HLLW	high-level liquid waste
GVB	generalised valence bond	HLW	high-level waste
HALT	highly accelerated life test(ing)	HMC	hidden Markov chain
HASL	hot air solder levelling	HMD	helmet mounted display
HASS	highly accelerated stress screening	HMM	hidden Markov model
HAST	highly accelerated stress test(ing)	HMO	Huckel molecular orbitals
HAWT	horizontal axis wind turbines	HMOS	high-performance metal-oxide-semiconductor
HB	horizontal branch	HMTSeF	hexamethylenetetraselenafulvalene (-inium)
HBM	human body model	HMTTF	hexamethyltetraathiofulvalene (-inium)
HBS	home bus system	HOAB	heptyloxyazoxybenzene
HBT	heterojunction bipolar transistor <i>or</i> N-(p-hexyloxybenzylidene)-p-toluidene	HOE	holographic optical elements
HCDA	hypothetical core disruptive accident	HOMO	highest occupied molecular orbitals
HCI	human-computer interaction	HOPG	highly oriented pyrolytic graphite
HCMOS	high-speed complementary MOS	HOS	higher order statistics
HCP	hexagonal close packed	HPCI	high-pressure coolant injection
HCSEL	horizontal cavity surface emitting laser	HPCS	high-pressure core sprays
HD-MAC	high-definition MAC	HPF	High Performance FORTRAN
HD-VCR	high-definition VCR	HREELS	high-resolution EELS
HDD	hard disc drive	HREM	high-resolution electron microscopy
HDDR	hydrogenation disproportionation desorption recombination	HRSG	heat recovery steam generator
HDI	high-density interconnect	HRV	heart rate variability
HDL	hardware description language	HSLA	high-strength low alloy (steel)
HDLC	high-level data link control	HSLAN	high-speed LAN
HDM	hot dark matter	HST	Hubble Space Telescope
HDMI	high-density multichip interconnect	HT	high tension
HDPE	high-density polyethylene	HTGR	high-temperature gas-cooled reactor
HDSL	high bit-rate digital subscriber lines	HTGRSC/C	HTGR steam cycle cogeneration
HDTV	high-definition television	HTML	Hypertext Markup Language
		HTSC	high-temperature superconductor
		HTTP	Hypertext Transfer Protocol
		HTTR	High-Temperature Engineering Test Reactor
		HUD	head-up display
		HV	high voltage



HVAC	heating, ventilation and air conditioning <i>or</i> high-voltage alternating current	IFS	iterated function system
HVDC	high-voltage direct current	IGBT	insulated gate bipolar transistor
HVEM	high-voltage electron microscopy	IGCC	integrated gasification combined cycle
HVIC	high-voltage integrated circuit	IGES	Initial Graphics Exchange Specification
HWIR	hardware-in-the-loop	IGFET	insulated gate FET
HWLWR	heavy water moderated LWR	IGT	insulated gate transistor
HWR	heavy water reactor	IHEP	Institute of High Energy Physics
HZE	high Z and energy	IIR	infinite impulse response
HZP	hot zero power	IKBS	intelligent knowledge-based system
I-FOG	interferometric fibre-optic gyroscope	IKO	Institute v. Kernph Ouder (Amsterdam)
I-V	current-voltage	ILD	interlayer dielectric
i.i.d.	independently identically distributed	ILP	inductive logic programming
I/O	input/output	ILS	instrument landing system
I <sup>2</sup> L	integrated injection logic	ILW	intermediate level (radioactive) waste
I <sup>3</sup> L	isoplanar I <sup>2</sup> L	IM	induction motor
IAEA	International Atomic Energy Agency	IM-DD	intensity modulated direct detection
IAR	isobaric analogue resonance	IMA	integrated modular avionic
IAS	isobaric analogue state	IMAPS	International Microelectronics and Packaging Society
IBA	interacting boson approximation	IMD	intermodulation distortion
IBAD	ion beam assisted deposition	IMPATT	impact avalanche transit time
IBC	integrated broadband communication network	IN	intelligent network
IBFA	interacting boson-fermion approximation	INDO	incomplete neglect of differential overlap
IBM	interacting boson model <i>or</i> International Business Machines	INDOR	internuclear double resonance
IBPBAC	isobutyl-4-(4'-phenylbenzylidene-amino) cinnamate	INEPT	insensitive nuclei enhanced by polarisation transfer
IBT	insulated base transistor	ING	intense neutron generator
IC	integrated circuit	INO	iterative natural orbital
ICA	independent component analysis	INS	inertial navigation system <i>or</i> Information Network System
ICAM	integrated computer-assisted manufacturing	INSPEC	Information Services for the Physics and Engineering Communities
ICB	ionised cluster beam	INTELSAT	International Telecommunications Satellite Consortium
ICDF	intermediate coupling Dirac-Fock	INTOR	International Tokamak Reactor
ICE	in-circuit emulator	INTUG	International Trade and User Group
ICF	inertial confinement fusion	IOC $\omega$	inclusion of the overlap charges in the omega
ICMA	idle signal casting multiple access	IP	Internet Protocol
ICP	inductively coupled plasma	IPC	Institute for Interconnecting and Packaging Electronic Circuits
ICPP	Idaho Chemical Processing Plant	IPSE	integrated programming support environment <i>or</i> integrated project support environment
ICRF	ion cyclotron range of frequencies	IPSS	international packet switching system
ICRH	ion cyclotron resonance heating	IR	infrared
ICTS	isothermal capacitance transient spectra(-oscopy)	IRBIC	infrared beam induced current(s) (contrast)
ICU	intensive care unit	IREB	intense relativistic electron beam
IDDQ	quiescent power supply current	IRE	infrared emitting diode
IDEF	ICAM definition	IRFPA	infrared focal plane array
IDFL	integral diode FET logic	IRQ	interrupt request
IDT	interdigital transducer	IRS	information retrieval system
IDTV	improved definition television	IS	information system
IEC	interexchange carrier <i>or</i> International Electrotechnical Commission	ISA	Industry Standard Architecture <i>or</i> Instrument Society of America
IEE	Institution of Electrical Engineers	ISAR	inverse synthetic aperture radar
IEEE	Institute of Electrical and Electronics Engineers	ISDN	integrated services digital network
IEPA	independent electron pair approximation	ISDSN	integrated services digital satellite network
IES	Institute of Environmental Sciences	ISFET	ion-sensitive FET
IETS	inelastic electron tunnelling spectra (-oscopy)	ISHM	International Society for Hybrid Microelectronics
IF	intermediate-frequency	ISI	intersymbol interference
IFA	ionisation front accelerator	ISL	integrated Schottky logic <i>or</i> inter-satellite link
IFE	intelligent front end	ISM	industrial, scientific and medical
IFF	identification friend or foe		
IFIP	International Federation for Information Processing		
IFM	instantaneous frequency measurement		



ISM	interstellar medium	LDA	laser Doppler anemometry (-meter) <i>or</i> local density approximation
ISO	International Standards Organization	LDD	lightly doped drain
ISP	Internet service provider	LDI	lossless discrete integrator
ISPBX	integrated services PBX	LDMOS	lateral double-diffused metal oxide semiconductor
ISR	intersecting storage ring	LDPE	low density polyethylene
ISS	ion scattering spectroscopy	LDV	laser Doppler velocimetry (-meter)
ISX	impurity study experiment	LEAR	Low Energy Antiproton Ring
IT	information technology	LEC	liquid encapsulated Czochralski <i>or</i> local exchange carrier
ITC	ionic thermocurrents	LED	light emitting diode
ITEP	Institute of Theoretical and Experimental Physics	LEED	low energy electron diffraction
ITO	indium tin oxide	LEFD	Large Experimental Fusion Device
ITOX	internal thermal oxidation	LEIS	low energy ion scattering
ITR	Ignition Test Reactor	LEMP	lightning electromagnetic pulse
ITU	International Telecommunication Union	LEO	low-Earth orbit
IU	Indiana University (USA)	LEP	Large Electron Positron (CERN)
IVHS	intelligent vehicle highway system	LET	linear energy transfer
IVO	improved virtual orbitals	LEU	low enrichment uranium (10% U235)
IVP	initial value problem	LEU/Th	low enrichment U/Th fuel
$J^\pi$	spin/parity (nuclear levels)	LF	low-frequency
JAERI	Japan Atomic Energy Research Institute	LFSR	linear feedback shift register
JANET	Joint Academic Network	LGA	land grid array
JCL	job control language	LHC	Large Hadron Collider (CERN)
JEDEC	Joint Electronic Device Engineering Council	LHPG	laser heated pedestal growth
JET	Joint European Torus	LHRH	lower hybrid resonance heating
JFET	junction FET	LIF	laser induced fluorescence
JINR	Joint Institute for Nuclear Research	LIFO	last in, first out
JIT	just in time	LIGA	lithography galvanofomung abformung
JPEG	Joint Photographic Experts Group	LIM	linear induction motor
JSD	Jackson system development	LIME	laser induced magnetically enhanced
JT-60	Japanese Tokamak-60	LINAC	linear accelerator
JTAG	Joint Test Action Group	LIS	laboratory information system
JTC	joint transform correlator	LIS	library information system
JTIDS	Joint Tactical Information Distribution System	LISP	List Processor (language)
KADS	knowledge acquisition and design structuring	LLTR	Large Leak Test Rig
KBS	knowledge-based system	LLW	low level (radioactive) waste
KDD	knowledge discovery in databases	LMC	Large Magellanic Cloud
KdV	Korteweg-de Vries	LMDS	local multipoint distribution system
KEK	Japan National Laboratory for High Energy Physics	LME	liquid metal embrittlement
KGD	known good die	LMFBR	liquid metal fast breeder reactor
KKR	Korringa-Kohn-Rostoker	LMI	linear matrix inequalities
LAAS	local-area augmentation system	LMIS	liquid metal ion source
LAMPF	Los Alamos Meson Physics Facility	LMR	liquid metal reactor <i>or</i> land mobile radio
LAN	local-area network	LMS	least mean square(s) <i>or</i> land mobile satellite
LATA	local access and transport area	LMSS	land mobile satellite system
LAWN	local-area wireless network	LMTO	linear combination of muffin tin orbitals
LB	Langmuir-Blodgett	LMXB	low-mass X-ray binary
LBIC	light beam induced current(s)	LNA	low noise amplifier
LBLOCA	large break LOCA	LNB	low noise block
LC	inductance-capacitance	LNG	liquified natural gas
LCA	logic cell array	LO	local oscillator <i>or</i> longitudinal optical
LCAO	linear combination of atomic orbitals	LOCA	loss of coolant accident
LCBO	linear combinations of (semi-localised) band orbitals	LOCE	loss of coolant experiment
LCC	leadless chip carrier	LOCOS	local oxidation of silicon
LCCC	leadless ceramic chip carrier	LOF	loss of flow
LCD	liquid crystal display/device	LOFT	Loss of Flow Test Facility
LCI	load commutated inverter	LOFW	loss of feed water
LCP	Large Coil Program <i>or</i> least cost planning	LOLP	loss of load probability
LCTF	Large Coil Test Facility	LONA	low noise amplifier
LCTV	liquid crystal television	LOOSP	loss of onsite power
LD	laser diode	LOS	line of sight <i>or</i> loss of signal
		LOTOS	Language Of Temporal Ordering Specification



LP	linear programming	MEG	magnetoencephalography (-gram)
LPC	linear predictive coding	MEI	measured equation of invariance
LPCS	low pressure core spray	MEMS	microelectromechanical system
LPCVD	low pressure CVD	MERIE	magnetically enhanced reactive ion etching
LPE	liquid phase epitaxy	MESFET	metal-semiconductor FET
LPEE	liquid phase electroepitaxy	MEU	medium enrichment uranium (20% U235)
LPFL	low pinchoff-voltage FET logic	MEU/Th	medium enrichment U/Th fuel
LPI	low probability of intercept <i>or</i> liquid photoimageable	MF	medium-frequency
LQ	linear quadratic	MFIE	magnetic field integral equation
LQG	linear quadratic Gaussian	MFM	magnetic force microscopy
LRO	long-range order	MFP	mean free path
LSA	least squares approximation <i>or</i> limited space charge accumulation	MFQ	maximally flat quadratic
LSB	least significant bit	MFR	mirror fusion reactor
LSD	local spin density <i>or</i> loop shut-down	MFSFET	metal-ferroelectric-semiconductor FET
LSI	large-scale integration	MFSK	multiple frequency shift keying
LSP	line spectrum pair	MFTF	Mirror Fusion Test Facility
LSPB	Large Scale Prototype Breeder	MHD	magnetohydrodynamics
LSSD	level sensitive scan design	MHEG	Multimedia and Hypermedia Experts Group
LSTF	Large Scale Test Facility	MHS	message handling system
LTE	local thermodynamic equilibrium	MHTGR	modular HTGR
LTi	linear time invariant	MIC	microwave integrated circuit
LTR	loop transfer recovery	MID	magnetically insulated diode <i>or</i> moulded interconnect device
LUMO	lowest unoccupied molecular orbitals	MIDI	musical instrument digital interface
LV	low voltage <i>or</i> left ventricle	MIDP	microwave induced delayed phosphorescence
LW	long-wave	MIG	metal inert gas <i>or</i> metal-in-gap
LWBR	light water breeder reactor	MIL-STD	military standard
LWHCR	light water high convertor reactor	MIM	metal-insulator-metal
LWIR	long-wavelength infrared	MIMD	multiple input (instruction), multiple data
LWR	light water reactor	MIMIC	millimetre-wave monolithic integrated circuit
M-QAM	multilevel QAM	MIMO	multiple input, multiple output
M1	magnetic dipole	MIN	multiprocessor interconnection network
M2	magnetic quadrupole	MIND	mass impregnated non-draining
MAC	multiplexed analogue components <i>or</i> media access control	MINDO	modified incomplete NDO
MAG	metal arc gas	MIPS	million instructions per second
MAGFET	magnetic field sensitive FET	MIS	management information system <i>or</i> metal-insulator-semiconductor
MAGLEV	magnetic levitation	MISFET	metal-insulator-semiconductor FET
MAI	multiple access interference	MISO	multiple input, single output
MAN	metropolitan-area network	MIT	Massachusetts Institute of Technology (USA)
MAP	Manufacturing Automation Protocol <i>or</i> maximum a posteriori <i>or</i> medium access protocol	MITATT	mixed tunnelling avalanche transit time
MARC	machine readable catalogue	ML	Martin-Löf
MARS	Mirror Advanced Reactor Study	ML-EM	maximum likelihood expectation maximization
MAS	magic angle spinning	MLB	multilayer board
MATE	modular automatic test equipment	MLC	multilayer ceramic
MBBA	4-methoxybenzylidene-4'-n-butylaniline	MLE	maximum likelihood estimation
MBC	meteor burst communication	MLE	molecular layer epitaxy
MBE	molecular beam epitaxy	MLP	multilayer perceptron
MBPT	many body perturbation theory	MLS	microwave landing system <i>or</i> multi-level secure
MBR	model-based reasoning	MLSE	maximum likelihood sequence estimation
MCCB	moulded-case circuit breakers	MLTF	multilayer thick film
MCCI	molten core-concrete interaction	MLW	medium level (radioactive) waste
MCD	magnetic circular dichroism	MM	millimetre
MCFC	molten carbonate fuel cell	MMDS	multichannel microwave distribution system
MCFR	magnetic confinement fusion reactor	MMF	magnetomotive force <i>or</i> multimode fibre
MCM	multichip module <i>or</i> multicarrier modulation	MMI	man-machine interface
MCP	microchannel plate	MMIC	monolithic microwave integrated circuit
MCSCF	multiconfiguration SCF	MMSE	minimum mean squared error
MCVD	modified chemical vapour deposition		
MCX $\alpha$	multiconfiguration X $\alpha$		
MDS	maximum distance separable		
MEC	molecular electron correlation(s)		



MMU	memory management units	$\mu$ -TAS	micro total analysis system
MNDO	modified neglect of differential overlap	$\mu$ CF	muon-catalysed fusion
MNOS	metal-nitride-oxide-semiconductor	$\mu$ P	microprocessor
MO	molecular orbitals	$\mu$ SR	muon spin rotation (resonance)
MOCVD	metal-organic chemical vapour deposition	MUF	material unaccounted for <i>or</i> maximum usable frequency
MODFET	modulation doped FET	MUMPS	Multi-User Multi-Programming System
MODOR	microwave-optical double resonance	MUSE	multiple sub-Nyquist sampling encoding
MODPOT	modulator potential	MUSIC	multiple signal characterisation
MOKE	magneto-optical Kerr effect	MUX	multiplexer(-ing)
MOMBE	metal-organic MBE	MV	medium voltage
MONOS	metal-oxide-nitride-oxide-semiconductor	MVDR	minimum variance distortionless response
MOPA	master oscillator power amplifier	MVDS	multipoint video distribution system
MORB	mid-ocean ridge basalt	MVTL	modified variable threshold logic
MOS	metal-oxide-semiconductor	MWIR	mid-wavelength infrared
MOSFET	metal-oxide-semiconductor FET	MWPC	multiwire proportional chamber
MOSIS	metal oxide semiconductor implementation service	NA	numerical aperture
MOST	metal-oxide-semiconductor transistor	NAA	neutron activation analysis
MOV	metal oxide varistor	NAL	National Accelerator Laboratory
MOVPE	metal-organic vapour phase epitaxy	NAND	NOT-AND (logic)
MOX	mixed oxide fuel	NAPLPS	North American Presentation Level Protocol Syntax
MPEG	Moving Picture Experts Group	NASA	National Aeronautics and Space Administration
MPH	moving plasmoid heater	NASICON	sodium zirconium silicate phosphate
MPI	Message Passing Interface	NATO	North Atlantic Treaty Organisation
MPP	massively parallel processing	NAVSTAR	Navigational Satellite Timing and Ranging
MPPT	maximum power point tracking	NBETF	Neutral Beam Engineering Test Facility
MPSK	multiple phase shift keying	NBFM	narrowband frequency modulation
MPU	microprocessing unit	NBI	neutral beam injection
MQORC	modified quadrature overlapped raised cosine	NBPS	neutral beam power systems
MQW	multiple quantum well	NC	numerical control
MR	magnetoresistive	NCAR	National Center for Atmospheric Research (USA)
MRAC	model reference adaptive control	NCBR	nitride cooled breeder reactor
MRC	minimum resolvable contrast	NCMET	non-closed shell many electron theory
MRD	multiple-reference double excitation	NCSL	National Conference of Standards Laboratories
MRI	magnetic resonance imaging	NDDO	neglect of diatomic differential overlap
MRINDO	modified Rydberg INDO	NDE	nondestructive evaluation
MRP	manufacturing resources planning <i>or</i> materials requirements planning	NDO	neglect of differential overlap
MRS	monitored retrievable storage (radioactive waste) <i>or</i> magnetic resonance spectroscopy	NDR	negative differential resistance
MRT	minimum resolvable temperature	NDRO	nondestructive readout
MS	management science	NDSF	non-dispersion-shifted fibre
MSB	most significant bit	NDT	nondestructive testing
MSE	mean square error	NEA	negative electron affinity
MSGD	micro-strip gas detector	NEC	National Electric Code
MSI	medium scale integration	NEMA	National Electrical Manufacturers Association
MSK	minimum shift keying	NET	Next European Tokamak
MSM	metal-semiconductor-metal	NETD	noise equivalent temperature differential
MSR	molten salt reactor	NEXAFS	near-edge X-ray absorption fine structure
MSS	mobile satellite system	NEXT	near-end crosstalk
MSSM	minimal supersymmetric standard model	NGS	nuclear generating station
MSSW	magnetostatic surface wave	NHS	National Health Service (UK)
MSU	Michigan State University	NIC	negative impedance convertor
MSW	magnetostatic waves	NICAM	near-instantaneously companded audio multiplex
MSX $\alpha$	multiple scattering X $\alpha$	NIR	near infrared
MT	machine translation <i>or</i> magnetotelluric	NIST	National Institute of Standards and Technology (USA)
MTBF	mean time between failures	NLC	nematic liquid crystal
MTF	modulation transfer function	NLMS	normalised least mean square(s)
MTI	moving target indicator	NLP	natural language processing
MTL	merged-transistor logic	NLTE	non-local thermodynamic equilibrium
MTR	maximum transition run-length	NMOS	n-channel MOS
MTTF	mean time to failure		
MTTR	mean time to repair		
MTX $\alpha$	muffin-tin X $\alpha$		



NMR	nuclear magnetic resonance	OFDCS	optical fibre digital communication system
NMR-ON	NMR on oriented nuclei	OFDM	orthogonal FDM
NMRR	normal-mode rejection ratio	OH	ohmic heating
NMS	network management system	OHTE	Ohmically Heated Toroidal Experiment
NNI	network node interface	OISF	oxidation induced stacking fault
NNDO	neglect of non-neighbour differential overlap	OLAP	online analysis and processing
NOAA	National Oceanic and Atmospheric Administration (USA)	OLCR	optical low coherence reflectometer(-try)
NOFC	New Oxide Fuels Complex (BNFL)	OLTP	online transaction processing
NOR	NOT-OR (logic)	OMCVD	organometallic CVD
NOVA	nonoverlapping super-self-aligned	OMI	optical mode interference
NOW	network of workstations	OMT	object modelling technique
NP	nondeterministic polynomial	OMVPE	organometallic vapour phase epitaxy
NPL	National Physical Laboratory (UK)	ONA	open network architecture
NPP	nuclear power plant	ONO	oxide-nitride-oxide
NQR	nuclear quadrupole resonance	OO	object-oriented
NRC	Nuclear Regulatory Commission (USA)	OOP	object-oriented programming
NRD	nonradiative dielectric	OPA	optical parametric amplifier
NRM	natural remanent magnetisation	OPAC	online public access catalogue
NRZ	non-return to zero	OPF	optimal power flow
NRZI	NRZ inverted	OPGW	optical fibre composite ground wire
NS	Navier-Stokes (equations)	OPHF	orbital polarised Hartree-Fock
NSLS	National Synchrotron Light Source	OPO	optical parametric oscillator
NSPUdT	natural single phase unidirectional transducer	OPW	orthogonal plane wave
NSRR	Nuclear Safety Research Reactor	OQPSK	offset quadrature phase shift keying
NSSS	nuclear steam supply system	OR	operations research
NTC	negative temperature coefficient	ORB	object request broker
NTD	neutron transmutation doping	ORELA	Oak Ridge Electron Linear Accelerator (USA)
NTE	network termination equipment	ORNL	Oak Ridge National Laboratory (USA)
NTL	nonthreshold logic	OS	operating system
NTSC	National Television Standards Committee or National Television Systems Committee	OS-EM	ordered subset expectation maximization
NTT	Nippon Telegraph and Telephone	OSI	Open Systems Interconnection
NTU	network termination unit	OSP	organic solderability preservative
NURBS	non-uniform rational B-spline	OSS	operations support system
NVL	night vision laboratory	OTA	operational transconductance amplifier
NVLAP	National Voluntary Laboratory Accreditation Program	OTDR	optical time domain reflectometry
NVM	nonvolatile memory	OTEC	ocean thermal energy conversion
NVRAM	nonvolatile RAM	OTF	optical transfer function
NWA	network analyser	OTH	over the horizon
NWPA	Nuclear Waste Policy Act (USA)	OTS	Orbital Test Satellite
OA	office automation	OTSG	once-through steam generator
OAM	operations, administration and maintenance	OZI	Okubo-Zweig-Lizuka (quark model)
OAM&P	operations, administration, maintenance and provisioning	PAA	paraazoxyanisole
OATS	open area test site	PABX	private automatic branch exchange
OBDD	ordered binary decision diagram	PAC	perturbed angular correlation or probably approximately correct
OBIC	optical beam induced current(s)	PACS	picture archiving and communication system or personal access communication system
OBIRCH	optical beam induced resistance change	PAFC	phosphoric acid fuel cells
OCR	optical character recognition	PAH	polycyclic aromatic hydrocarbon(s)
OCRWM	Office of Civilian Radioactive Waste Management (USA)	PAHR	post-accident heat removal
OCT	optical coherence tomography	PAL	phase alternate line or programmable array logic
ODA	Office Document Architecture	PAM	programmable active memory or pulse amplitude modulation
ODE	ordinary differential equation	PANDA	polarisation maintaining and absorption reducing
ODMG	Object Data Management Group	PAP	paraazoxyphenetole
ODMR	optical detection of magnetic resonance	PARS	private advanced radio service
ODP	open distributed processing	PBF	power bursts facility
OEIC	optoelectronic integrated circuit	PBFA	Particle Beam Fusion Accelerator
OEM	original equipment manufacture(r)	PBGA	plastic ball grid array
OER	oxygen enhancement ratio	PBH	planar buried heterostructure
		PBL	planetary boundary layer
		PBR	pebble bed reactor



PBT	permeable base transistor	PID	proportional+integral+differential (derivative)
PBW	power-by-wire	PIN	p-type intrinsic n-type
PBX	private branch exchange	PIPECO	photoion photoelectron coincidence
PC	personal computer <i>or</i> printed circuit <i>or</i> programmable controller	PIUS	process inherent ultimately safe
PCA	principal component analysis	PIXE	photon induced X-ray emission
PCAC	partially conserved axial currents	PL	photoluminescence
PCB	polychlorinated biphenyl <i>or</i> printed circuit board	PLA	phase locked array <i>or</i> programmable logic array
PCES	phase change energy storage	PLBR	Prototype Large Breeder Reactor
PCI	pellet-cladding interaction <i>or</i> Peripheral Component Interconnect	PLC	programmable logic control
PCILO	perturbative configuration interaction using localised orbitals	PLCC	plastic leadless chip carrier
PCILOCC	PCILO for crystal calculation	PLD	programmable logic device
PCM	phase change material <i>or</i> pulse code modulation	PLEX	plant life extension
PCMCIA	Personal Computer Memory Card International Association	PLL	phase locked loop
PCN	personal communications network	PLT	Princeton Large Torus
PCR/V	prestressed concrete reactor vessel	PLZT	lead lanthanum zirconate titanate
PCS	personal communication services (systems)	PM	permanent magnet <i>or</i> phase modulation <i>or</i> pulse modulation
PCTE	Portable Common Tools Environment	PMAD	power management and distribution
PCV	primary containment vessel	PMDR	phosphorescence microwave double resonance
PCX	plasma confinement experiment	PMF	polarisation maintaining fibre
PD	partial discharge	PML	perfectly matched layer
PDB	planar doped barrier	PMMA	polymethylmethacrylate
PDE	partial differential equation	PMOS	p-channel metal-oxide-semiconductor
PDEF	physical design exchange format	PMR	proton magnetic resonance
PDF	probability density (distribution) function	PMS	pre-main sequence
PDH	plesiochronous digital hierarchy	PMSM	permanent magnet synchronous motor
PDLC	polymer dispersed liquid crystal	PN	planetary nebula(e) <i>or</i> pseudonoise
PDP	plasma display panel	PNDO	partial neglect of differential overlap
PDT	photodynamic therapy	PNO-CI	pair natural orbital configuration interaction
PDX	Poloidal Divertor Experiment	PNS	Pulsed Neutron Source
PE	phase encoded	PO	physical optics
PEC	photoelectrochemical cell	POL	pair orthogonalised Lowdin
PECVD	plasma enhanced CVD	PON	passive optical network
PEEK	polyaryletheretherketone <i>or</i> polyetheretherketone	POP/AE	protons on protons and electrons
PEEL	programmable electrically erasable logic	POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl
PEFC	polymer electrolyte fuel cell	PORV	power operated relief valve
PEM	photo-electromagnetic <i>or</i> privacy-enhanced mail <i>or</i> proton exchange membrane	POS	point of sale
PEP	Positron Electron Photon (collider, Stanford, USA)	POTS	plain old telephone service
PES	photoelectron spectra (-oscopy)	PPB	parts per billion
PET	polyethylene terephthalate <i>or</i> positron emission tomography	PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations
PETRA	Positron Electron Tandem Ringbeschleuniger Anlage	PPI	plan position indicator
PF	poloidal field <i>or</i> power factor	PPM	parts per million <i>or</i> pulse position modulation
PFBC	pressurised fluidised bed combustion	PPP	Pariser-Parr-Pople
PFC	power factor correction	PQFP	plastic quad-flat-pack
PFM	pulse frequency modulation	PRA	probabilistic risk assessment
PFP	power factor pre-regulator	PRAM	parallel random access machine
PFR	Prototype Fast Reactor	PRDDO	partial retention of diatomic differential overlap
PGA	pin grid array	PREPP	Process Experimental Pilot Plant
PHIGS	Programmer's Hierarchical Interactive Graphic System	PRF	pulse recurrence (repetition) frequency
PHS	personal handy-phone system	PRIME	positive resist images by dry etching
PHWR	pressurised heavy water reactor	PRMA	packet reservation multiple access
PIC	particle-in-cell	PRML	partial response maximum likelihood
		PRN	packet radio networks
		PROLOG	Programming in Logic (language)
		PROM	Pockels readout optical modulator <i>or</i> programmable ROM
		PS	proton synchrotron (CERN)
		PSA	probabilistic safety assessment
		PSD	power shut-down <i>or</i> power spectral density



PSDN	packet switched data network	R&D	research and development
PSG	phosphosilicate glass	RACE	Research and Development in Advanced Communications Technologies in Europe
PSK	phase shift keying		
PSNR	peak signal-to-noise ratio		
PSS	packet switching service <i>or</i> power system stabiliser	RAD	ribbon-against-drop
PSTN	public switched telephone network	RAID	redundant arrays of inexpensive disks
PSU	power supply unit	RAM	radar absorbing material <i>or</i> random access memory <i>or</i> reliability, availability and maintainability
PTC	positive temperature coefficient		
PTD	physical theory of diffraction	RAMDAC	random access memory digital/anologue convertor
PTF	polymer thick film		
PTFE	polytetrafluoroethylene	RAN	radio-area network
PTH	plated through hole	RBE	relative biological effectiveness
PTM	pulse time modulation	RBF	radial basis function
PTT	Posts, Telephones and Telegraphs	RBMK	light water cooled, graphite moderated reactor
PV	photovoltaic		
PVC	polyvinyl chloride	RBOC	Regional Bell Operating Company
PVD	physical vapour deposition	RBS	Rutherford backscattering
PVDF	polyvinylidene fluoride	RBSOA	reverse biased safe operating area
PVER	pattern visual evoked response	RC	resistance-capacitance
PVM	Parallel Virtual Machine	RCCB	residual current circuit breaker
PWA	partial wave analysis	RCD	residual current device
PWB	printed wiring board	RCIC	reactor core isolation cooling
PWBA	plane wave Born approximation	RCS	radar cross-section <i>or</i> rapid cycling synchrotron <i>or</i> reactor coolant systems
PWIA	plane wave impulse approximation		
PWM	pulse width modulation	RCTL	resistor-capacitor-transistor logic
PWR	pressurised water reactor	RDBMS	relational DBMS
PXI	PCI extensions for instrumentation	RDS	Radio Data System
PZT	lead zirconate titanate	RDSS	radio determination satellite service
QA	quality assurance	REA	rod ejection accident
QAM	quadrature amplitude modulation	REE	rare earth element(s)
QASK	quadrature amplitude shift keying	REELS	reflection electron energy loss spectra (-oscopy)
QBO	quasi-biennial oscillation		
QC	quality control	RELP	residual excited linear prediction
QCD	quantum chromodynamics	REM	reflection electron microscopy <i>or</i> rare earth metal(s) <i>or</i> rapid eye movement
QCPM	quadrature continuous phase modulation		
QCSE	quantum confined Stark effect	REMPI	resonance enhanced multiphoton ionisation
QD	quantum dot		
QDMBPT	quasi-degenerate MBPT	RESURF	reduced surface field
QED	quantum electrodynamics	RF	radio-frequency
QFP	quad-flat-pack <i>or</i> quantum flux parametron	RFI	RF interference
QFSK	quadrature frequency shift keying	RFIC	RF integrated circuit
QFT	quantum field theory	RFP	reversed field pinch <i>or</i> request for proposals
QGP	quark-gluon plasma		
QHD	quantum hadrodynamics	RFPR	reversed field pinch reactor
QHE	quantum Hall effect	RFX	reversed field (pinch) experiment
QMD	quantum molecular dynamics	RG	renormalisation group
QMF	quadrature mirror filter	RGB	red, green, blue
QML	qualified manufacturers list	RGM	resonating group method
QORC	quadrature overlapped raised cosine	RHEED	reflection high-energy electron diffraction
QoS	quality of service	RHET	resonant hot electron transistor
QOSRC	quadrature overlapped squared raised cosine	RHF	restricted Hartree-Fock
		RHIC	relativistic heavy ion collider
QPL	qualified parts (or products) list	RIA	reactivity initiated accident
QPM	quark-parton model	RIB	radioactive ion beam
QPO	quasi-periodic oscillation	RIBE	reactive ion beam etching
QPR	quadrature partial response	RICH	ring imaging Cherenkov detector
QPRS	quadrature partial response signalling	RIE	reactive ion etching
QPSK	quaternary phase shift keying	RINDO	Rydberg incomplete NDO
QRC	quasi-resonant converter	RISC	reduced instruction set computer
QSO	quasi-stellar object (quasar)	RKKY	Rudermann-Kittel-Kasuya-Yosida
QTAG	Quality Test Action Group	RLC	resistance-inductance-capacitance
QW	quantum well	RLI	run-length limited
QWH	quantum well heterostructure	RLS	recursive least squares
QWIP	quantum well infrared photodetector	RLSA	radial line slot antenna
QWITT	quantum well injection transit time	RMS	root-mean-square



RNA	ribonucleic acid	SCC	stress corrosion cracking
RNS	residue number system	SCDMA	synchronous code division multiple access
ROC	receiver operating characteristic	SCE	service creation environment
ROM	read-only memory	SCF	self-consistent field
ROV	remotely operated vehicle	SCFL	source-coupled FET logic
ROXNOX	reoxidised nitrided oxide	SCH	separate confinement heterostructure
RPA	random phase approximation	SCL	space charge limited
RPAE	RPA with exchange	SCM	subcarrier multiplex(ing)
RPC	resistive plate chamber/counter <i>or</i> remote procedure call	SCP	service control point
RPM	relaxation potential model <i>or</i> revolutions per minute	SCPC	single channel per carrier
RPV	reactor pressure vessel <i>or</i> remote piloted vehicle	SCPI	Standard Commands for Programmable Instruments
RS	Reed-Solomon	SCR	silicon-controlled rectifier
RSA	reverse saturable absorber <i>or</i> Rivest-Shamir-Adleman	SCSI	Small Computer System Interface
RSCE	reverse short channel effect	SCTF	Slab Core Test Facility
RSF	response surface function	SDB	silicon direct bonding
RSFQ	rapid single flux quantum	SDF	synthetic discriminant function
RT	room temperature	SDFL	Schottky-diode FET logic
RTA	rapid thermal annealing	SdH	Shubnikov-de Haas
RTD	resonant tunnelling diode	SDH	synchronous digital hierarchy
RTG	radioisotope thermoelectric generators	SDI	selective dissemination of information <i>or</i> Strategic Defense Initiative (USA)
RTI	road traffic informatics	SDL	Specification and Description Language
RTL	resistor-transistor logic <i>or</i> register transfer level	SDLC	synchronous data link control
RTN	rapid thermal nitridation	SDM	space division multiplexing
RTO	rapid thermal oxidation	SDMA	space division multiple access
RTP	rapid thermal processing	SDW	spin density wave
RTT	resonant tunnelling transistor	SEAM	scanning electron acoustic microscopy
RTTY	radio teletypewriter <i>or</i> remote teletype terminal	SECAM	sequential colour and memory
RTV	room temperature vulcanizing	SED	stochastic electrodynamics
RVB	resonating valence bond	SEE	single event effect(s)
RWG	Rao-Wilton-Glisson	SEED	self-electrooptic effect device
S/H	sample and hold	SEG	selective epitaxial growth
S/N	signal-to-noise	SEI	Software Engineering Institute
SAA	Systems Application Architecture	SEIG	self-excited induction generator
SAG	self-aligned gate	SEL	surface emitting laser
SAINT	self-aligned implantation for N <sup>+</sup> -layer technology	SEM	scanning electron microscopy
SAIR	synthetic aperture interferometric radar	SEMI	Semiconductor Equipment and Material International Association
SAM	scanning acoustic microscopy <i>or</i> scanning Auger microscopy <i>or</i> serial access memory	SEP	somatosensory evoked potential
SAMO	simulated ab initio molecular orbitals	SERC	Science and Engineering Research Council
SAMOS	stacked gate avalanche injection metal-oxide-semiconductor	SERS	surface enhanced Raman scattering
SAMPLE	simulation and modelling of profile in lithography and etching	SETI	search for extraterrestrial intelligence
SAN	small-area network	SEU	single event upset
SANS	small-angle neutron scattering	SEXAFS	surface extended X-ray absorption fine structure
SAR	synthetic aperture radar <i>or</i> specific absorption rate	SFE	solar-flare effect
SARSAT	search and rescue satellite aided tracking	SFG	sum frequency generation
SAW	surface acoustic waves <i>or</i> self-avoiding walk	SFL	substrate-fed logic
SAXS	small-angle X-ray scattering	SFM	scanning force microscopy
SBE	super birefringence effect	SFUR	self-filtering unstable resonator
SBH	strip buried heterostructure	SGEMP	system generated electromagnetic pulse
SBLOCA	small-break LOCA	SGHWR	steam generating heavy water reactor
SBS	stimulated Brillouin scattering	SGML	Standard Generalized Markup Language
SC	switched capacitor	SGMP	sol-gel microsphere pelletisation
SCADA	supervisory control and data acquisition	SHF	super-high-frequency
SCARA	selective compliance assembly robot arm	SHG	second harmonic generation
		SHOOT	superfluid helium on-orbit transfer
		SHR	self-healing rings <i>or</i> South Hall Ring (MIT-Bates)
		SHS	self-propagating high-temperature synthesis
		SHV	super-high voltage
		SI	semi-insulating <i>or</i> Système International
		SICOS	sidewall base contact structure



SID	Society for Information Display	SOL	scrape-off layers
SIF	stress intensity factor	SONET	synchronous optical network
SIL	single-in-line	SOP	small outline package <i>or</i> state of polarisation
SIMD	single instruction, multiple data	SOPPA	second-order polarisation propagator approximation
SIMOS	stacked-gate injection MOS	SOR	successive over-relaxation <i>or</i> synchrotron orbital radiation
SIMOX	separation by implantation of oxygen	SOS	silicon on sapphire
SIMS	secondary ion mass spectra (-oscopy)	SOT	small outline transistor
SIN	Swiss Institute of Nuclear Research	SPA	separated pair approximation
SINDO	scaled incomplete NDO	SPARC	scalable processor architecture <i>or</i> Standards Planning and Requirements Committee (of ANSI)
SINR	signal-to-interference-plus-noise ratio	SPC	statistical process control <i>or</i> stored program control
SIPOS	semi-insulating polycrystalline silicon	SPCP	single parity check product (code)
SIR	safe integral reactor <i>or</i> signal-to-interference ratio	SPDT	single pole, double throw
SIS	semiconductor-insulator-semiconductor <i>or</i> superconductor-insulator-superconductor	SPDT	single-point diamond turning
SISAM	spectrometer with interference-selective amplitude modulation	SPE	solid phase epitaxy
SISFET	semiconductor-insulator-semiconductor FET	SPEAR	Stanford Positron Electron Asymmetric Ring
SISO	single input, single output	SPECT	single photon emission computerised tomography
SIT	static induction transistor	SPICE	Simulation Program with Integrated Circuit Emphasis
SLAC	Stanford Linear Accelerator	SPLEED	spin polarised low energy electron diffraction
SLALOM	semiconductor laser amplifier in a loop mirror	SPM	scanning probe microscopy
SLAM	scanning laser acoustic microscopy	SPN	stochastic Petri net
SLC	smectic liquid crystal <i>or</i> Stanford Linear Collider <i>or</i> subscriber loop carrier	SPRITE	signal processing in the element
SLD	strict logical determinacy	SPS	Super Proton Synchrotron (CERN)
SLIA	Spiral Line Induction Accelerator	SPST	single pole single throw
SLIC	subscriber line interface circuit	SPUDT	single-phase unidirectional transducer
SLM	spatial light modulator	SQAM	superposed QAM
SLSF	Sodium Loop Safety Facility	SQC	statistical quality control
SMA	surface mount(ed) assembly <i>or</i> shape memory alloy	SQL	Structured Query Language
SMATV	satellite master antenna television	SQPR	staggered quadrature partial response
SMC	Small Magellanic Cloud <i>or</i> surface mount(ed) component	SQPSK	staggered quadrature PSK
SMD	surface mount(ed) device	SQS	self-quenching streamer chamber
SMDS	switched multimegabit data service	SQUID	superconducting quantum interference device
SME	shape memory effect	SQW	single quantum well
SME	small and medium-sized enterprises	SR	synchrotron radiation
SMES	superconductive magnetic energy storage	SRAM	static RAM
SMF	single mode fibre	SREMP	source region electromagnetic pulse
SMIF	standard mechanical interface	SRM	switched reluctance motors
SMOBC	solder mask over bare copper	SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
SMPS	switched mode power supply	SRO	short-range order
SMQORC	staggered modified quadrature overlapped raised cosine	SRS	stimulated Raman scattering
SMSR	side mode suppression ratio	SRV	safety release valve
SMT	surface mount(ed) technology	SS	spread spectrum
SN	supernova(e)	SS-TDMA	satellite switched TDMA
SNA	Systems Network Architecture	SS7	Signalling System No.7
SNM	special nuclear material	SSB	single sideband
SNMP	simple network management protocol	SSBW	surface skimming bulk wave
SNR	signal-to-noise ratio <i>or</i> supernova remnant	SSC	sudden storm commencement <i>or</i> Superconducting Super Collider
SNS	spallation neutron source <i>or</i> superconducting normal superconducting	SSCR	spectrum shift controlled reactor
SOA	safe operating area <i>or</i> semiconductor optical amplifier	SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SOFC	solid oxide fuel cells	SSFLC	surface stabilised ferroelectric liquid crystal
SOG	spin on glass <i>or</i> strongly orthogonal geminal <i>or</i> sea of gates	SSI	small scale integration
SOI	silicon on insulator <i>or</i> signal of interest	SSMA	spread spectrum multiple access
SOIC	small outline integrated circuit		



SSNTD	solid-state nuclear track detector	TDD	time division duplex
SSR	subsynchronous resonance	TDDb	time dependent dielectric breakdown
SST	sea surface temperature <i>or</i> supersonic transport <i>or</i> super self-aligned technology	TDF	Technology Demonstration Facility <i>or</i> transborder data flow
SSV	structured singular value	TDHF	time dependent Hartree-Fock
STAP	space time adaptive processing	TDI	time delay and integration
STATCOM	static compensator	TDM	time division multiplex(ing)
STD	salinity-temperature-depth <i>or</i> subscriber trunk dialling	TDMA	time division multiple access
STEC	solar thermal energy conversion	TDMF	time dependent mean field theory
STEM	scanning transmission electron microscopy	TDPAC	time differential PAC
STEP	Standard for Exchange of Product Data	TDR	time domain reflectometry
STI	scientific and technical information <i>or</i> shallow trench isolation	TDRSS	tracking and data relay satellite system
STL	Schottky transistor logic <i>or</i> Standard Template Library	TDS	thermal desorption spectra (-oscopy)
STM	scanning tunnelling microscopy <i>or</i> synchronous transfer mode	TE	transverse electric
STN	super twisted nematic	TEA	transversely excited atmosphere
STO	Slater-type orbitals	TED	transferred electron device
STOL	short take-off and landing	TEGFET	two-dimensional electron gas FET
STP	Slater-transfer Preuss	TEM	transmission electron microscopy <i>or</i> transverse electromagnetic
STS	scanning tunnelling spectra(-oscopy)	TEO	transferred electron oscillator
SURMAC	surface magnetic confinement	TEOS	tetraethylorthosilicate
SUSY GUT	supersymmetric grand unified theory	TETRA	trans-European trunked radio
SVC	static VAr compensator	TEXT	Texas Experimental Tokamak
SVD	singular value decomposition	TF	toroidal field
SW	short-wave	TFCX	Toroidal Fusion Core Experiment
SWAMI	sidewall masked isolation	TFEL	thin film electroluminescent
SWAP	synchronous wireless access protocol	TFSOI	thin film silicon on insulator
SWEAT	standard wafer-level electromigration accelerated test	TFT	thin film transistor
SWEPP	Stored Waste Examination Pilot Plant	TFTR	Tokamak Fusion Test Reactor
SWNT	single wall nanotube	TGA	thermogravimetric analysis
SWR	sodium water reactor <i>or</i> standing wave ratio	TGFB	triglycine fluoroberyllate
SXAPS	soft X-ray appearance potential spectra (-oscopy)	TGS	triglycine sulphate
SXLS	Superconducting X-ray Lithography Source	TGSe	triglycine selenate
T/H	track and hold	THA	track-and-hold amplifier
T/R	transmit/receive	THD	total harmonic distortion
TA	transverse acoustic	THF	tremendously high frequency
TAB	tape automated bonding	THG	third harmonic generation
TACS	Total Access Communications System	THORP	Thermal Oxide Reprocessing Plant
TASI	time assignment speech interpolation	THORS	Thermal Hydraulic Out-of-Reactor Safety Facility
TAT	transatlantic telephone cable	THTF	Thermal Hydraulic Test Facility
TBBA	terephthal-butylaniline	TIA	Telecommunications Industry Association
TBDF	transborder data flow	TID	travelling ionospheric disturbance
TCAD	technology CAD	TIG	tungsten inert gas
TCAS	traffic alert and collision avoidance system	TIL	two-interdigitation level
TCE	temperature coefficient of expansion	TINA	Telecommunications Information Network(ing) Architecture
TCM	trellis-coded modulation	TISSS	Tester-Independent Software Support System
TCNE	tetracyanoethylene	TJS	transverse junction stripe
TCNQ	tetracyanoquinodimethane	TLD	thermoluminescent dosimeter (-ry)
TCP/IP	Transport Control Protocol/Internet Protocol	TLM	transmission line matrix
TCR	temperature coefficient of resistance <i>or</i> thyristor-controlled reactor	TM	transverse magnetic
TCSC	thyristor-controlled series compensation (capacitor) <i>or</i> thyristor-controlled series capacitor	TMAH	tetramethyl ammonium hydroxide
TCXO	temperature compensated crystal oscillator	TMC	test module coil
TDD	ternary decision diagram	TMHR	tandem mirror hybrid reactor
		TMMC	tetramethylammonium manganese chloride
		TMN	telecommunications management network
		TMR	tandem mirror reactor
		TMS	truth maintenance system
		TMTSF	tetramethyltetraselenafulvalene (-inium)
		TMTTF	tetramethyltetrathiafulvalene (-inium)
		TMX-U	Tandem Mirror Experiment-Upgrade
		TNS	The Next Step
		TO	transverse optical



TOF	time-of-flight	UHV	ultra-high voltage
TOFMS	time-of-flight mass spectra	UIMS	user interface management system
TOP	Technical Office Protocol <i>or</i> transient overpower accident	UJT	unijunction transistor
TPAD	time differential perturbed angular distribution	UKAEA	United Kingdom Atomic Energy Authority
TPC	time projection chamber	ULA	uncommitted logic array
TPD	temperature programmed desorption	ULF	ultra-low frequency
TPP	thermal power plant	ULSI	ultra-large scale integration
TPS	test program(me) set	UMD	unitised microwave devices
TPTF	Two Phase Flow Test Facility	UML	Unified Modeling Language
TPV	thermophotovoltaic	UMTS	universal mobile telecommunication system
TQFP	thin quad flat pack	UNI	user-network interface
TQM	total quality management	UPFC	unified power flow controller
TR3	time-resolved resonant Raman (spectra (-oscopy))	UPS	ultraviolet photoelectron spectra (-oscopy) <i>or</i> uninterruptible power supply
TRAPATT	trapped plasma avalanche triggered transit	UPT	universal personal telecommunication
TRD	transition radiation detector	URL	uniform resource locator
TREAT	Transient Reactor Test Facility	US	ultrasonic
TRM	thermoremanent magnetisation	USART	universal synchronous/asynchronous receiver transmitter
TRRR	time-resolved resonant Raman (spectra (-oscopy))	UTD	uniform theory of diffraction
TRU	transuranic (waste)	UTP	unshielded twisted pair
TRV	transient recovery voltage	UUT	unit under test
TSC	thermally stimulated currents <i>or</i> totally self checking	UV	ultraviolet
TSD	thermally stimulated desorption	VACSY	variable angle correlation spectroscopy
TSEE	thermally stimulated exo-electron emission	VAD	vapour-phase axial deposition
TSeF	tetraselenafulvalene (-inium)	VAN	value-added network
TSeT	tetraselenatetracene	VANS	VAN services
TSIC	thermally stimulated ionic currents	VAWT	vertical axis wind turbine
TSMA/PCD	tone sense multiple access/partial collision detection	VB	valence bond
TSOP	thin small-outline package	VBL	vertical Bloch line
TSP	travelling salesman problem	VBR	variable bit rate
TSR	terminate and stay resident	VC	virtual circuit <i>or</i> Vapnik-Chervonenkis
TSTA	Tritium Systems Test Facility	VCCS	voltage-controlled current source
TTC	telemetry tracking and command	VCO	voltage-controlled oscillator
TTF	tetrathiafulvalene (-inium)	VCR	video cassette recorder
TTL	transistor-transistor logic	VCSEL	vertical cavity surface emitting laser
TTMP	transit time magnetic pumping	VCVS	voltage-controlled voltage source
TTT	temperature-time-transformation <i>or</i> tetrathiatetracene	VCXO	voltage-controlled crystal oscillator
TTY	teletype terminal	VDM	vector dominance model <i>or</i> Vienna Development Methodology
TUCA	transient undercooling accident	VDMOS	vertical double diffused MOS
TUCOP	transient undercooled overpower accident	VDSL	very high-speed digital subscriber line
TUNNETT	tunnel transit time	VDT	visual display terminal
TV	television	VDU	visual display unit
TVRO	TV receive only	VDW	van der Waals
TW	travelling wave	VER	visual evoked response
TWA	travelling wave amplifier	VFD	vacuum fluorescent display <i>or</i> variable-frequency drive
TWOA	travelling wave optical amplifier	VFO	variable-frequency oscillator
TWT	travelling wave tube	VGA	Video Graphics Array
TWTA	TWT amplifier	VGf	vertical gradient freeze
TXRF	total reflection X-ray fluorescence	VHDL	VHSIC HDL
UART	universal asynchronous receiver transmitter	VHF	very high frequency
UBR	unspecified bit rate	VHPIC	very high-performance integrated circuit
UCHF	uncoupled Hartree-Fock	VHSIC	very high-speed integrated circuit
UCN	ultra-cold neutrons	VHSOL	very high-speed optical loop
UDP	user datagram protocol	VHV	very high voltage
UHF	ultra-high frequency <i>or</i> unrestricted Hartree-Fock	VI&P	visual, intelligent and personal (communications)
UHPS	underground hydroelectric pumped storage	VIPER	verified processor for enhanced reliability
		VISA	Virtual Instrument Software Architecture
		VJFET	vertical junction FET
		VLBI	very long base line interferometry
		VLBR	very low bit rate
		VLC	variable length code



VLF	very low frequency	WIP	work in progress
VLIW	very long instruction word	WIPO	World Intellectual Property Organisation
VLSI	very large scale integration	WIPP	Waste Isolation Pilot Plant
VM	virtual machine	WKB	Wentzel-Kramers-Brillouin
VMEbus	versatile modular E-bus	WLAN	wireless LAN
VMOS	vertical channel MOS	WLL	wireless local loop
VMS	Virtual Management System	WORM	write once, read many times
VNA	vector network analyser	WP	word processing
VOC	volatile organic compound	WR	Wolf-Rayet
VoD	video on demand	WSI	wafer scale integration
VOR	VHF omnidirectional range	WWER	water moderated water cooled reactors
VP	virtual path	WWW	World Wide Web
VPE	vapour phase epitaxy	WYSIWYG	what you see is what you get
VPN	virtual private network	WZW	Wess-Zumino-Witten
VQ	vector quantisation	XANES	X-ray absorption near edge structure
VR	virtual reality	XCT	X-ray computerised tomography
VRAM	video RAM	XLPE	cross-linked polyethylene
VRC	visual record computer	XLS	X-ray Lithography Source
VRML	Virtual Reality Modeling Language	XOR	exclusive OR (logic)
VS	virtual storage	XPD	cross-polarisation discrimination
VSAT	very small aperture terminals	XPS	X-ray photoelectron spectra
VSF	vestigial sideband	XRD	X-ray diffraction
VSEPR	valence shell electron pair repulsion	XTEM	cross-sectional transmission electron microscopy
VSI	voltage source inverter	XUV	X-ray-ultraviolet
VSOP	very small-outline package	YAG	yttrium aluminium garnet
VSP	vertical seismic profiling	YIG	yttrium iron garnet
VSS	variable structure systems	YM	Yang-Mills
VSWR	voltage standing wave ratio	YSO	young stellar object(s)
VTOL	vertical take-off and landing	YSZ	yttria-stabilised zirconia
VTR	video tape recorder <i>or</i> voltage transformation ratio	YTO	YIG tuned oscillator
VUV	vacuum ultraviolet	ZAMS	zero-age main sequence
VVER	water moderated water cooled reactors	ZBLA	zirconium barium lanthanum aluminium fluoride
VVVF	variable voltage, variable frequency	ZBLAN	zirconium barium lanthanum aluminium sodium fluoride
VXI	VME extensions for instrumentation	ZBLANP	zirconium barium lanthanum aluminium sodium lead fluoride
WAAS	wide-area augmentation system	ZCS	zero-current switching
WAN	wide-area network	ZEKE	zero kinetic energy
WARC	World Administrative Radio Conference	ZGS	zero gradient synchrotron
WASP	WSI associative string processor	ZIF	zero insertion force
WATS	wide-area telecommunications service	ZMR	zone melting recrystallisation
WAXS	wide-angle X-ray scattering	ZPPR	zero-power plutonium reactor
WDF	wave digital filter	ZRC	zero-field cooling(-ed)
WDM	wavelength division multiplex(ing)	ZTP	Z toroidal pinch
WDMA	wavelength division multiple access	ZVS	zero-voltage switching
WECS	wind energy conversion system	ZVT	zero-voltage transition
WHT	Walsh-Hadamard transform		
WIMP	weakly interacting massive particle <i>or</i> windows, icons, mice, pull-down menus		



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**adherence** *see adhesion*

**adhesion**

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**adlayers.** *see adsorbed layers; chemisorbed layers*

**ADM** *see delta modulation*

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**admittance** *see electric admittance*

**admittance measurement** *see electric admittance measurement*

**ADP** *see administrative data processing*

**ADPCM** *see differential pulse code modulation*

**ADSL** *see subscriber loops*

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*see also chemisorbed layers*

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**ARMA processes** *see* autoregressive moving average processes

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**CCCS** *see active networks*  
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**CCD imagers** see *CCD image sensors*

**CCII** see *current conveyors*

**CCIR standards** see *standards*

**CCTV** see *closed circuit television*

**CCVS** see *active networks*

**CD-ROM publication** see *optical publishing*

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**CDMA** see *code division multiple access*

**CDs (audio)** see *audio discs*

**CDW** see *charge density waves*

**Ceefax** see *teletext*

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(BiPb)<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>9</sub>/Ag HTSC tapes, powder-in-tube prep., J<sub>c</sub> 106552

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(BiPb)<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>9</sub>/Ag HTSC tapes, vortex melting line orig. 120114

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Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8</sub>, double-sheathed HTSC multifilamentary wires, crystn., crit. current dens., press. effects (*Japanese*) 87708

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Nb<sub>3</sub>Sn supercond. wires, crit. current, ang. depend. 77391

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- Tl(Ba<sub>1-x</sub>Sr<sub>x</sub>)<sub>2</sub>Ca<sub>2</sub>Cu<sub>2</sub>O<sub>7</sub> HTSC thin films, film/substr. interacts., supercond. props. 97973
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- Tl<sub>0.6</sub>Pb<sub>0.4</sub>Ba<sub>0.8</sub>Sr<sub>1.6</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> HTSC power cables develop. 93425
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*see also crystallography; stoichiometry*

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**crystal cleavage** *see specimen preparation*

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**EDIF** *see electronic data interchange*

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**erythema** *see biological effects of ultraviolet radiation*

**erythrocytes** *see blood*

**Esaki diodes** *see tunnel diodes*

**Esaki effect** *see tunnelling*

**ESCA** *see electron spectroscopy; spectrochemical analysis; X-ray photoelectron spectra*

**ESD** *see electrostatic discharge*

**ESDI** *see peripheral interfaces*

**ESPI** *see electronic speckle pattern interferometry*

**ESPRIT** *see research initiatives*

**ESR** *see paramagnetic resonance*

**Estelle** *see specification languages*

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*see also adaptive estimation; amplitude estimation; frequency estimation; information theory; maximum likelihood estimation; parameter estimation; phase estimation; recursive estimation; sequential estimation; state estimation*  
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**etalons** *see* interferometers

**etchants** *see* etching

**etching**

*see also* crystal defects; dislocation etching; laser beam etching; sputter etching

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**faults, electrical** *see electrical faults*

**fax** *see facsimile*

**FD-TD analysis** *see finite difference time-domain analysis*

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**FDM** *see frequency division multiplexing*

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**FDTD analysis** *see finite difference time-domain analysis*

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**FPGA** *see field programmable gate arrays*

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**GPIB** *see peripheral interfaces*

**GPS** *see Global Positioning System*

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**IDT** *see interdigital transducers*

**IEEE-488** *see peripheral interfaces*

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**IETS** *see tunnelling spectra; tunnelling spectroscopy*

**IEXE** *see ion microprobe analysis; X-ray chemical analysis*

**IF amplifiers** *see intermediate-frequency amplifiers*

**IGBT** *see insulated gate bipolar transistors*

**IGBT switches** *see power semiconductor switches*

**IGFET** *see insulated gate field effect transistors*

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**image transmission** *see visual communication*

**imagers** *see image sensors*

**images, optical** *see optical images*

**imaging, acoustic** *see acoustic imaging*

**imaging, infrared** *see infrared imaging*

**imaging, NMR** *see NMR imaging*

**IMMA** *see ion microprobe analysis*

**immittance, electric** *see electric immittance*

**immittance, electric, measurement** *see electric immittance measurement*

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see also *integrated circuit measurement*

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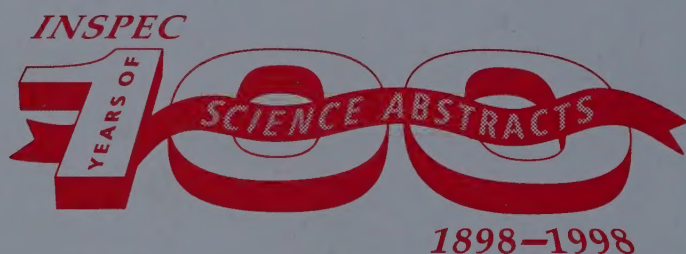
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